BOTANICAL GAZETTE.

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POISONOUS PROPERTIES OF THE LEGUMINOSÆ.—*Leguminosæ* from being once regarded as almost wholly innocent of poisonous properties, now comes to be considered as among the chief of sinners. Following hard upon each others heels come charges of damage to stock from *Oxytropis Lamberti* in Colorado; *Hosackia Purshiana* in Arizona; and two or three species of *Astragalus* in California. As if to complete the bad record against the order, Prof. H. C. Wood, M. D., has just published in the Philadelphia Medical Times, for August 4th, 1877, an account of a new and exceedingly poisonous alkaloid discovered by himself in the bean of *Sophora speciosa*. This he properly names *Sophoria*. It appears to act as a spinal sedative. "One-twentieth of a grain, of a very imperfect specimen, produced in a half grown cat deep sleep lasting many hours, and "the minutest speck of it produced in two minutes almost entire paralysis in the frog." In fact it has some striking points of resemblance to the action of Calabar Bean, of which it is a near relative. Mr. Bellinger, of Texas, states that the Indians, chewing half a bean, go off into "hilarious intoxication," followed by a sleep of a couple of days, and that dangerous symptoms are likely to follow the use of an entire bean. It is fortunate that the investigation of this drug has fallen into the hands of so competent and conscientious an investigator as Dr. Wood, as we may promise ourselves that in his "findings" crude guesses will not be reckoned as established truths.—Dr. J. T. ROTHROCK.

SHIPPING LIVE PLANTS.—On page 107 of the BOTANICAL GAZETTE is noticed the sending of a suite of American plants by myself to the Botanical Garden of Sydney, New South Wales, Australia. They were packed in wet sphagnum, in a tight wine cask, and sent to San Francisco, to expedite their transit. The venture proved a failure, as the plants mostly softened on the way. On the 9th of May last, I tried another venture. This suite consisted of the new *Nymphæa* from Florida, *N. lutea*, *N. odorata*, *Helonias bullata*, *Erythronium Americanum*, *Claytonia Virginica*, the new *Amarylli Atamasco* (?), *Thalictrum anemonoides*, *Pyxidanthera barbulata*. I procured plastic clay, and moistened it so that it could be conveniently worked in the hand. A wine cask was again used, and every root was compactly surrounded with the clay—it being packed in well, and hard with sand. I have to day, under date of June 28, received a letter from the director, Mr. Charles Moore, which to my joy, announces the arrival of the plants in the best condition, except the *Pyxidanthera*, which I should say was in poor state before the packing. Mr. Moore's words are: "The first trial was a failure. The second has been attended with the most perfect success, as the rhizomes of *Nymphæa lutea* and *N. odorata* are as fresh as when packed for transmission to this place. I am also much pleased to inform you that with the exception of one kind, *Pyxidanthera*, which is dead, all the other plants sent with the Nymphæas are alive."

I think then that for living plants to be shipped on long voyages, moist clay must be regarded as the best packing material. When it is intended to send entire plants, the roots should be firmly packed in clay, and the upper parts embedded in dry moss or hay.—SAMUEL LOCKWOOD, *Freehold, N. J., Aug.* 3, 1877.

VITALITY IN FERNS.—*Polypodium incanum* has been called the "Resurrection Fern" on account of its wonderful vitality, but our common *P. vulgare* appears to be no less tenacious of life. In November, 1876, as an experiment, I threw a plant of this latter species under a bench where it remained in a perfectly dry state, and subject to the warm atmosphere of a heated room, until late in April, 1877—a period of more than five months. It had become so dry and shriveled that it did not seem possible for any life to exist, yet under the influence of frequent rains it soon began to start and is now growing moderately.

Just how long life may be retained under such conditions as those to which this plant was subjected would seem to me to be an interesting subject for inquiry, and one that might lead to useful results in the transportation of certain plants.

It may not be out of place in this connection to state that last spring I took from some pressed herbarium specimens of *Trichomanes Petersii* sent to me a short time previously by Mr. Peters—I do not know how long they had been collected, but presume for a short time only—a plant and placed it under a bell glass. In a very few days it began to straighten up its tiny fronds and is now living and growing.—GEO. E. DAVENPORT, *Boston, Aug.* 3, 1877.

ADIANTUM CAPILLUS-VENERIS.—In a private letter Mr. Davenport makes the following statement in reference to this fern: "It might be an interesting fact to state that I have succeeded in cultivating this species from Utah in the open garden and carried my plant safely through the long severe winter of 1876–7 without any other protection than some loose brush thrown over it. The plant was set out in May, 1876, in some rock work by the side of a little brook, and had an open southern exposure. It grew finely all through the year, and proved itself hardy by surviving our last severe winter, and is now a fine, compact, healthy plant."—J. M. C.

NOTES FROM SOUTH WESTERN VIRGINIA.—Mr. Howard Shriver has just visited New River, a most interesting locality, and writes as follows: "I found *Cedronella* in a new spot at Carter's and Forney's (Allisonia C. H.). I also found at Carter's abundance of *Pyrularia oleifera*, but the blooms had nearly all fallen, leaving only one plant, with one pear in an unripe state. The plants seemed flourishing enough, so that I was at a loss to determine whether the failure to fruit resulted from the excessive drought, or from late frosts, which cut garden plants badly as well as some wild ones, or from some other cause. The flowers came several at a time and regularly dropped, until many stems were terminated by a single flower at the time of my arrival.

Halesia tetraptera had gone out of bloom, but the trees had made plenty of fruit, which was then about a quarter of its full size. *Chionanthus Virginica* was nearly out of bloom. The shrubs were found in abundance all along the river. *Ptelea trifoliata* lined the river shores for several miles and was in full bloom. So was *Celastrus scandens*. A plant much resembling *Phacelia parviflora* appeared sparingly on the shore. It does not answer satisfactorily to the above name and may be a variety. *Sedum ternatum* abounded, but I saw not a single *S. Nevii*, which abounds at Allisonia along with *S. ternatum*. I found here for the second time *Aspidium Goldianum*, Hook, and *Cystopteris fragilis*, Bernh., also *Asplenium angustifolium*, Mx. While sitting on the bank of New River with Forney, I desired him without moving to pass to me all the ferns he could reach, which were as follows: *Adiantum pedatum*, *Asplenium Trichomanes*, *Asplenium ebeneum*, *Aspidium acrostichoides*, var. *incisum*, *Cystopteris fragilis*, *Onoclea sensibilis*, *Woodsia obtusa*, *Osmunda Claytoniana*, and one or two others of which I am not certain, perhaps, *Cystopteris bulbifera*. I also found elsewhere, *Polypodium vulgare*, *Pteris aquilina*, *Pellæa atropurpurea*, *Asplenium Ruta-muraria*, *Camptosorus rhizophyllus*, *Phegopteris hexagonoptera*, *Aspidium marginale*, *Botrychium Virginicum*,

which about completes the list of New River at Carter's Ferry. At that date (June 2–13) *Phlox subulata* had gone out of bloom, also *Alsine stricta* and *Dianthus Armeria*. *Ruellia (strepens?)* was not yet in bloom, *Baptisia australis* in full flower, *Draba ramosissima* in bloom, *D. verna* in seed. *Nepeta Glechoma* was in infinite profusion, but miles of country produced not a single anther cross, all was our sturdy typical Wytheville plant. I found some huge leaved plants, but agree with Mr. Forney that all *large leaved ones are flowerless!* *Rhus aromatica* was out of bloom, the fruit already turning red. *Spiranthes cernua* was all along the shore, *Iris cristata* and *Phlox reptans* both almost out of bloom, *Menispermum Canadense* in full flower, some vines with good fruit, as good to the taste as an old grape. The most beautiful plant I met was that splendid ornament of the rocky cliffs *Heuchera*, with its dark green, mottled, or purple leaves All cliffs are beautified by it, usually along with the spray of *Cystopteris*, or the festoons of *Aristolochia Sipho* (in flower), or the beautiful *Ampelopsis*. *Brunella*, *Pentstemon*, *Castelleia*, were all in bloom, also *Allium cernuum*, *Sisyrinchium*, *Aplectrum*, *Liparis*, *Spiræa Aruncus*, *Medeola* (with 11 leaves), *Arisæma Dracontium*, *Kalmia*, *Rhododendron maximum* was out of bloom, *R. Catawbiense* not yet in bloom. *Pachystima Canbyi* at New River and Allisonia had neither flower nor fruit, but I had gathered a few good sized fruits at Wytheville before I left town (June 2). *Uvularia grandiflora and perfoliata* were both in fruit, the former abundant, the latter rather rare. At Carter's we met with a Sycamore 24 feet in circumference, with two of its limbs, one springing out of the north, the other of the south side, approaching each other on the east side and *grafted together*. The tree is hollow and is at times used by travelers as a camping place. While there I found a family of pigs in possession of it.

All the *Aquilegia* I have met with is small in flower and in height, except those I found on New River and in Pulaski County. On these plants, four or five feet high, the flowers were correspondingly huge, measuring nearly two inches. Is the prevailing small variety the common plant, or those very rare ones which are large in size of flower and stem? The flowers are scarlet without and yellow within. To my mind there are three varieties: first, these coarse, heavy giants with dark red flowers; second, our plant at Wytheville, a foot and a half high with intermediately delicate, divaricate branches, and flowers of brighter and prettier hue and more delicate structure than No. 1; third, a diminutive variety a foot high, but oftener under that measure, where the yellow interior led me at first to suppose I had a yellow variety, but it was merely a preponderance of the inner yellow, the exterior being the ordinary red or scarlet. Nos. 2 and 3 inhabit steep hills, or cliff faces, or the upper face and clefts of rocks. No. 1 inhabits deep shady woods, or fence corners on the level shores of New River in fine, rich, deep mold, far removed from the habitat of Nos. 2 and 3."

PLANTAGO MAJOR.—While botanizing this summer I was very much struck with a large patch of common Plantain. The plants were in a moist spot which seemed most favorable for their development and hundreds of them were standing so close that the ground was completely matted with their large leaves. Three peculiarities at once struck my attention. All the plants had coarsely toothed leaves, branching spikes, and were two or three feet in height. Upon referring to the books I find that the toothed leaves and long stems occasionally occur, and the GAZETTE has already recorded some branching spikes noted by Mr. N. Coleman and Mr. I. C. Martindale. Other patches have since been found and the coarse teeth are invariably present, the branching spikes and great length of scape and spike not always. Neither Dr. Gray nor Dr. Chapman give any measurements. Dr. Beck gives scape 8–12 inches and spike 2–6 inches, while Prof. Wood comes nearer the facts in putting the scape 1–3 feet and the spike 5–20 inches. I measured five specimens that I had brought in, and I had not taken the

longest because they were too unmanageable, and found the scapes to be 40, 42, 43, 44 and 45 inches, and the spikes 17, 18, 19, 21 and 22 inches in length. The branches of the spikes ran from three to ten in number and were from one to two inches in length. These branches nearly always forked again, making quite a dense brush on the end of the spike. The outermost, that is the lowest, branches invariably forked, the others not always. Occasionally it looked as if the original spike had been bitten or broken off and the lateral buds developed into branches to compensate for the loss of the terminal bud. But such arrest of the growth of the terminal bud could not always be made out, and in some specimens it was undoubtedly not the case.—J. M. C.

NOTES FROM WEST VIRGINIA.—During a trip up into West Virginia the first two weeks in July, made for the purpose of botanizing, I found on the banks of the Guyandotte River, near Barboursville, specimens of *Cleome pungens* growing wild. There were between 75 and 100 plants growing in a clump and a few others scattered along. They stood about half way between the water and the river bank, on the top of which was an old deserted house. It was about 50 or 75 feet from the plants and no sign of a garden, or, indeed, of any cultivated ground, was visible around it. They seemed to be perfectly naturalized and were growing finely. As this locality is within the limits of Gray's Manual, the plant deserves a place in that work. I am also informed by Mr. Lloyd, of Covington, that he found a patch of the same plant growing wild near the line of the Cincinnati Southern R. R., a few miles back of Covington.

On the top of the Hawk's Nest, on New River, I found a number of plants of *Corema Conradii*, but not in bloom, and *Cheilanthes lanuginosa*. Gray's Manual gives the habitat of the latter as Wisconsin, Iowa, Missouri and westward, and if I am not mistaken in the species, the Mountains of Virginia will have to be added.

Cuphea viscosissima was found in an old field just above the Hawk's Nest.—JOSEPH F. JAMES, *Cincinnati, O.*

VARIATIONS.—I have found the White Pine with leaves in sixes, some few fasicles in sevens. The sixes were quite abundant. The *Arisæma Dracontium*, Schott., is quite common here with leaflets from 15 to 17, and I have found one with 22 leaflets. The running blackberry is also frequent with flowers quite double and of a pinkish tinge.—N. COLEMAN.

CUSCUTA RACEMOSA.—In the January number of the GAZETTE, Dr. Engelmann gave a warning to the farmers, who wished to cultivate the Alfalfa, or California clover, to beware of the dodder, *Cuscuta racemosa*, which had always accompanied it in Europe and California. The warning was sent, throughout this region, to the county papers, but in spite of it all, seed agents have succeeded in running in a great deal of Alfalfa seed. As a consequence, a short time ago, after the clover had started well, I began to receive specimens of the plant encircled by a "troublesome little vine," and every body wanted to know what it was. It was the genuine *Cuscuta racemosa* in good flower and fruit, and it has come up in every Alfalfa field in this county. The agricultural editors of several widely circulated papers are recommending it and doing what they can to bring this annoying parasite into our fields.—J. M. C.

JEFFERSONIA DIPHYLLA, Pers.—In the vicinity of Hanover, Ind., this interesting plant may be found during the months of March and April, bedecking all the river hills with a profusion of bloom. As it is so abundant on the Ohio bluffs, one would naturally expect to find it abundantly in as favorable localities back from the river, but as yet none have been found except a very few specimens in a single little thicket. Were *Jeffersonia* local along the river its absence from other parts of the county would not

seem so striking. While thus noticing a selected range in reference to dissemination, another peculiarity comes to mind, viz., that on these same hill sides, it seems to select a *zone* of growth. This zone commences about the middle of the hill and with this as a base extends about half way to the top; the plants being most thrifty and abundant on the southern exposures. There is certainly something peculiar in this limit of range, as the lower portions of the hills offer, to all appearances, as favorable conditions for growth as the upper. The same might also be remarked in reference to many localities back from the river.

However the special object of this note is to point out some peculiar effects of cultivation upon this plant. The specimens I have are from the garden of Mr. E. A. Rau, Bethlehem, Penn., and the peculiarities are that *the leaves are prominently 4 to 5 lobed—lobes acute and mucronate.* I have just examined some 40 specimens collected here with the following results: 80 per cent *entire to undulate*, and 20 per cent *distinctly toothed;* in no specimens that I have ever seen have the leaves appeared lobed. We further notice that the leaves of the cultivated *Jeffersonia* are 4 to 5 times as large as those found in the woods and the pod is also much larger and heavier. The flowers the writer has never seen, but would infer that they were also much larger. I take the liberty to append a note from Mr. Rau in reference to this plant. He says, "The *Jeffersonia* was taken from the garden of Mr. Jacob Wolle, of Bethlehem, Penn., and as the plant has been detected by Mr. Wolle near Narrowsville, Bucks county, along the Nockamixon rocks, this may be the source of the specimens of which we write." Mr. Rau further adds that however uncertain the length of time this has been cultivated by Mr. Wolle, he knows it to have been under cultivation more than 12 years. Doubtless many others have noticed variations as a result of cultivation and failed to give publicity to their observations. But it seems to me both interesting and profitable to notice such marked effects as the one just described.—A. H. YOUNG, Hanover, Ind.

NATURAL GRAFTING.—Some five miles north-west of Hanover I was surprised to find a good-sized tree of *Carpinus Americana*, or Water Beech, apparently growing on the trunk of *Fagus ferruginea*, or the common Beech. A closer examination showed that the trees had started close together, and instead of one crowding the other out, they had coalesced, their bark had become continuous, and below where they fork it is impossible to tell which is which. The fork looks like a regular branch, the Water Beech coming out at quite an angle, according to its usual habit.—J. M. C.

HABENARIA PERAMŒNA, GRAY.—This showy Orchid has added much of beauty to our collections this summer. Orchids are exceedingly scarce in this range, and hence the advent of one in any quantity is most welcome to botanists. Now, the very interest and peculiar attactiveness of this plant this year lies in its abundance. It was first found here by the writer in July 1873, and has not been seen since by him, although I believe others have collected a very few specimens. Now this year it appears in considerable abundance both in the old locality and in many new ones, which in past years have been tramped over again and again without any finds. It is hardly reasonable to suppose seeds have been borne to six or seven localities, as many miles apart, during the past year, and, on the other hand, if these plants have lain dormant so long there is much interest in a rest of such long duration.—A. H. Y.

SPERMACOCE GLABRA, MICHX.—We are glad to be able to record the rediscovery of this desirable plant. In 1870 it was named in the list of Mr. A. H. Young, as growing in Jefferson county on the river bank. As no specimens were saved, the discovery was practically of no value, and after repeated searches along the river bank doubt began to arise in our minds whether we really were entitled to the plant or not. In 1874, in my incom-

plete list of Jefferson county plants, trusting to Mr. Young's botannical acuteness, I included this species at the same time following him in the mistake, which was merely an oversight on his part, of putting the time of flowering in May and June. Now it has been discovered again in reasonable abundance, specimens have been made, and our title to it is without a flaw. It is barely in full flower this 6th day of August, thus confirming the date given in Gray's Manual. It is possible that it has been passed repeatedly for *Lycopus*, which it sometimes resembles at the first blush, but the much larger whorls and flowers, and the entire leaves soon separate it from that, and a glance at the developed corolla at once carries us far away from the *Labiatæ*.—J. M. C.

NOTES ON THE FLORA OF CLINTON COUNTY, MO.—It was the privilege of the writer to spend a few weeks of the past summer on the prairies of North-western Missouri, and the list of his collection, together with some brief notes are presented to the readers of the GAZETTE.

The country is now nearly all under cultivation, so that tracts of unbroken prairie occur only here and there, in areas of 80 or 160 acres. The water courses, from Clinton county south to the Missouri river, are heavily wooded. An old resident informed me that when she came to the county forty-seven years ago, not a stick of timber was to be seen where now oaks and elms from six inches to two feet in diameter, stand so thick on the ground that it is impossible to drive through the forest without clearing. Certainly tree-growth in that county must have been very rapid!

Three-fourths of the timber trees belong to the genus *Quercus*. *Q. imbricaria*, Mx., forms about one-half of the Oaks and *Q. rubra*, L., nearly a fourth; while *Q. alba*, L., *Q obtusiloba*, Mx., *Q. macrocarpa*, Mx., and *Q. Prinus*, L. var. *acuminata*, Mx., make up the remainder. The flora of the woods is strikingly similar to that of Southern Indiana, consisting as it does of such species as *Geum strictum*, *Mimulus alatus*, *Gerardia flava*, *Desmodium acuminatum*. *Phryma Leptostachya*, etc.

The collection during July and a part of August embraced the following species:

Polygala incarnata, L., seems to be very scarce. Only one specimen was secured.

Trifolium pratense, L. Two heads were obtained having the flowers perfectly white —not even a rosy tinge about them.

Psoralea floribunda, Nutt., scarce. Half a dozen specimens were found, growing in a clump of Post Oaks.

Petalostemon violaceus, Mx. and *Petalostemon candidus*, Mx., very abundant on open prairie. The later comes into bloom about a week earlier than the former and has a shorter season.

Amorpha canescens, Nutt. Plentiful. Certainly the supposition that this plant indicates lead ore becomes false here.

Baptisia leucantha, T. & G. So common that it becomes a troublesome weed in cornfields and pastures. Racemes often 3 feet long.

Baptisia leucophæa, Nutt. Common in rich pastures.

Potentilla arguta, Pursh. Gray says "common westward," but only one plant was seen.

Lythrum alatum, Pursh. Common in pastures and by roadside.

Eryngium yuccæfolium, Mx. Abundant.

Liatris pycnostachya, Mx. Low grounds; very common.

Solidago Missouriensis, Nutt. The earliest Solidago.

Silphium laciniatum, L. Not scarce.

Silphium integrifolium, Mx. More abundant than the last. There seem to be two forms of this species. One is typical except that the stem is not "4-angular" but perfectly round. The other is much more slender, the stem "4-angular and grooved," the

upper leaves ovate-lanceolate, lower lanceolate inclining to spatulate. Comparative measurements of lower leaves, as follows.

FIRST FORM.—Length, 4⅝ inches; Gr. width, 2 1-17; width, 1 inch above base 1⅞.

SECOND FORM.—Length, 6 inches: Gr. width, 1 1-16; width, 1 inch above base, ⅜.

Of the second form all but a few of the upper pairs of leaves are conspicuously narrowed toward the base. The stem and leaves are too rough to be referred to the variety *lævæ*.

Echinacea angustifolia, DC. Rather rare.

Rudbeckia subtomentosa, Pursh. Abundant.

Coreopsis palmata, Nutt. Tolerably abundant.

Dysodia chrysanthemoides, Lag. Entirely too common along roadsides where it exhales its offensive odor.

Cacalia tuberosa, Nutt. Grows abundantly in wet places.

Plantago Patagonica, Jacq., var. *aristata*, Gray. Very common along roadsides. The var. is quite distinct from the typical form

Ruellia ciliosa, Nees. Very abundant along hedges. Several patches were observed in which the corolla was cream-colored and marked inside with dark lines.

Verbena hastata, L. Called "Iron-weed" here. Grows in pastures, sometimes taking complete possession of them. At least three-fourths of the plants examined were without hastate leaves. Corolla often rose-colored.

Verbena stricta, Vent. Not so common as the last.

Asclepias tuberosa, L. Very showy and very common. A specimen was found having the umbels arranged in two terminal racemes instead of a corymb. Each raceme was about a foot long, bearing the umbels in the axils of the leaves.

Asclepias verticillata, L, Very delicate and by no means abundant.

Acerates longifolia, Ell. Grows in clumps in old pastures.

Habenaria leucophæa, Gray. Rare and beautiful.

Tradescantia Virginica, L. Grows along every hedge. I observed a cluster of ten or twelve stalks having the petals pale lavender color and the filaments bearded with *magenta* hairs.

Cyperus inflexus, Muhl. Scarce. Only six or eight plants were secured.

Boutelona curtipendula, Gray. Grows in patches among the prairie grass.

Tripsacum dactyloides, L. Grows with *Spartina cynosuroides* and resembles it to some extent.—C. R. BARNES, *Madison, Indiana*.

SOME LARGE SPECIMENS OF ARISÆMA TRIPHYLLUM.—In the July number of the GAZETTE, in the article of Mr. Barnes, I find measurements of an *Arisæma triphyllum* from Trimble county, Ky., and a request for the record of a larger one. In this species, as in the others mentioned, Jefferson county still leads. In July, while taking a botanical trip through one of the ravines near Hanover, my attention was arrested by an *Arisæma*, which I felt convinced must exceed the measurements given by Mr. Barnes. Its measurements were as follows: Height 45½ inches: side leaflets 12½ inches long by 8 broad: end leaflet 13½ inches by 7 broad; spread of lateral leaflets 26½ inches; diameter at base of stalk 1½ inches; circumference of corm 7½ inches. It will be noticed that the height of this exceeds that recorded by Mr. Barnes over 15 inches; that the leaflets are from 2½ to 3½ inches longer, but an inch or two narrower; and the diameter of the stalk and corm the same. The length of spadix and spathe could not be obtained on account of their having withered.

This was not an exceptional specimen, since in the immediate vicinity I measured 12 others which exceeded 40 inches in length with other measures proportional, and there must have been fully 100 specimens exceeding 3 feet. A great variation in the propor-

tion between the length and breadth of the leaflets is noticed in measuring, as well as in height and diameter of stalk. What peculiarities of soil and exposure cause such large growths in our plants can scarcely be decided, but the fact remains that many of our plants think nothing of attaining a size at least double that allowed by law.—M. S. C.

RECENT PUBLICATIONS.—*American Journal of Science and Arts*, August.—Dr Gray has an article on "Some Points of Botanical Nomenclature," suggested by some correspondence between a Belgian botanist, A. Cogniaux, and Alph. DeCandolle, printed in the *Bulletin de la Societe Royale de Botanique de Belgique*, 1876. "M. Cogniaux ask some questions, rising out of the way in which genera, their synonyms, and some species are succinctly dealt with or referred to in the Genera Plantarum now in course of publication." "The fact is, that the name of an author, or its abridgment, appended to the name of a genus, or to a specific name, is mere bibliography, stands in the place of a citation of author, work, page, etc." "This suffix of authors' names is not a matter of homage or sentiment, or justice, but a matter of fact, i. e., of historical record. The guiding principle to this record is, that we are not to make an author say that which he has not said." Hence, when a new genus is made and a number of species formerly belonging to other genera are said to be contained in it, the names of the original authors of those species should not be appended to the specific names, but the name of the person who arranged them under the new genus.

American Naturalist, August.—Mr. C. E. Bessey, of Ames, Iowa, has an interesting article recording "Observations on *Silphium laciniatum*, the so-called Compass Plant." Six tables are given giving the bearings of ninety-three leaves. About thirty per cent. of the leaves observed did not vary more than five degrees, forty-two per cent. not more than ten degrees, and ninety per cent. not more than forty-five degrees from the meridian. The variation of fifty-four of the leaves was to the east, and thirty-nine to the west. Many of the leaves had rotated upon their petioles in assuming their positions and most of these had rotated with the sun. One leaf was found to have rotated through at least 270 degrees of arc to reach its final position. Mr. Bessey has also made some examinations with his microscope to see whether the number of stomata upon the two surfaces of the leaf had anything to do with its polarity. His observations all led to the conclusion that the stomata had nothing to do with it, and we are still in the dark as to the cause.

Field and Forest, July.—The leading article is by Prof. J. W. Chickering, Jr., on "A Botanical Trip to Virginia." The article contains quite a list of good "finds," and a comparison of the flora of Norfolk with that of Washington. In the minutes of the Potomac-side Naturalists' Club mention is made of Dr. Vasey reading a paper upon the distribution of trees in the United States, with the promise of its publication in full in a future number.

Gardener's Monthly, August, is full of interesting notes for florists and horticulturists. A brief article on "Rare Plants of Southern Utah," and the notes on Forestry, are of special interest.

Catalogue of Phænogamous and Acrogenous Plants found growing wild in the State of Michigan, compiled by Elmore Palmer, M. D. of Dexter, Michigan. This catalogue was mislaid or it would have been noticed in a former number. It is a neat pamphlet of 16 pages, containing a list of over 500 genera and about 1,300 species.

The Botanical Index, July.—Published by L. B. Case, Richmond, Ind. This is an eight page quarterly devoted to the interests of florists. This number contains a discussion of Lawns and Lawn plants.